

IN THE CLAIMS

1. (Currently amended) A device for forming an image on a screen comprising;
a coherent illumination means,
an electrically addressed spatial light modulator means located in ~~the~~ a path of light
from the coherent illumination means,
means for producing computer generated hologram images for display on the
electrically addressed spatial light modulator means, and
optics to direct light diffracted by the electrically addressed spatial light modulator
means to the screen,
wherein the computer generated image or images displayed by the electrically
addressed spatial light modulator means result in a two dimensional image being formed at
the screen.
2. (Currently amended) ~~[[A]]~~ The device according to claim 1 wherein the electrically
addressed spatial light modulator means comprises a plurality of electrically addressed spatial
light modulators.
3. (Currently amended) ~~[[A]]~~ The device according to claim 1 wherein the coherent
illumination means illuminates the electrically addressed spatial light modulator means with
red, green and blue light.
4. (Currently amended) ~~[[A]]~~ The device according to claim 3 wherein the electrically
addressed spatial light modulator means is sequentially illuminated by the coherent
illumination means with red, green and blue light
5. (Currently amended) ~~[[A]]~~ The device according to claim 3 wherein separate portions
of the electrically addressed spatial light modulator means are simultaneously illuminated by
the coherent illumination means with red, green and blue light.
6. (Currently amended) ~~[[A]]~~ The device according to claim 1 wherein ~~the~~ a frame rate
of the electrically addressed spatial light modulator means is greater than ~~the~~ a frame rate of
the two dimensional image formed at the screen.

7. (Currently amended) ~~[[A]]~~ The device according to claim 1 in which the means for producing computer generated hologram images comprises a store of a plurality of pre-calculated computer generated holographic elements.

8. (Currently amended) ~~[[A]]~~ The device according to claim 1 in which the means for producing computer generated hologram images is configured to produce computer generated hologram images for display on the electrically addressed spatial light modulator means that provide a regular array of pixels on the screen.

9. (Currently amended) ~~[[A]]~~ The device according to claim 8 wherein the array of pixels on the screen is sub-divided into blocks and the image at the screen is formed by sequentially writing one or more blocks to the screen.

10. (Currently amended) ~~[[A]]~~ The device according to claim 1 wherein the coherent illumination means comprises at least one laser.

11. (Currently amended) ~~[[A]]~~ The device according to claim 1 wherein additional magnification optics are provided such that a magnified two dimensional image may be formed at the screen.

12. (Currently amended) A method of forming a two dimensional image on a screen comprising: ~~the steps of;~~

i) ~~illuminating an electrically addressed spatial light modulator means with coherent light,~~

ii) ~~displaying a computer generated hologram image on the electrically addressed spatial light modulator means so as to diffract light therefrom, and~~

iii) ~~using optics to direct directing light diffracted by the electrically addressed spatial light modulator means to a screen;~~

~~whereby the electrically addressed spatial light modulator means is arranged to display an image or images that produce a two dimensional image at the screen.~~

13. (Cancelled)

14. (Previously Presented) A device for forming an image on a screen comprising;
at least one coherent laser,
at least one electrically addressed spatial light modulator located in the path of light
from said at least one coherent laser,
a computer for producing at least one computer generated hologram image for display
on said at least one electrically addressed spatial light modulator, and
optics to direct light diffracted by said at least one electrically addressed spatial light
modulator to the screen,
wherein said at least one computer generated image displayed by said at least one
electrically addressed spatial light modulator causes a two dimensional image to be formed at
said screen.
15. (Currently amended) [[A]] The device according to claim 14 further comprising a
plurality of electrically addressed spatial light modulators.
16. (Currently amended) [[A]] The device according to claim 14 wherein said computer is
configured to produce computer generated hologram images for display on said at least one
electrically addressed spatial light modulator that provides a regular array of pixels on said
screen.
17. (Currently amended) [[A]] The device according to claim 16 wherein the array of
pixels on the screen is sub-divided into blocks and the image at the screen is formed by
sequentially writing one or more blocks to the screen.
18. (Currently amended) [[A]] The device according to claim 14 further comprising a
plurality of coherent lasers.
19. (Currently amended) [[A]] The device according to claim ~~17~~ 18 wherein said plurality
of coherent lasers comprises at least a red, blue and green laser.
20. (Currently amended) [[A]] The device according to claim 14 further comprising
magnification optics.

21. (New) The method according to claim 12 further comprising:
sub-dividing the two dimensional image into blocks; and
sequentially writing the blocks to the screen.